

CLAIMS

What is claimed is:

- 1           1.     A surgical drain comprising:
  - 2               (a)     a longitudinal axis;
  - 3               (b)     an interior lumen;
  - 4               (c)     an outer surface;
  - 5               (c)     an opening for connection to an outflow tube;
  - 6               (e)     a first plurality of openings formed in the outer surface and
  - 7     extending along the longitudinal axis, at least some of the first plurality of openings in
  - 8     fluid communication with the interior lumen; and
  - 9               (f)     a second plurality of openings, each of the second plurality of
  - 10    openings having a different shape and size than the openings of the first plurality of
  - 11    openings.
- 1           2.     A surgical drain having an elongated, flexible body, two ends, a length
- 2     and a longitudinal axis, and comprising:
  - 3               (a)     an outer surface;
  - 4               (b)     an interior lumen;
  - 5               (c)     an opening to connect the drain to an outflow tube;
  - 6               (d)     a first plurality of openings formed in the outer surface and in fluid
  - 7     communication with the interior lumen, the first plurality of openings comprising
  - 8     alternating large cross-sectional openings and small cross-sectional openings.
- 1           3.     The drain of claim 2 wherein the large cross-sectional openings are
- 2     circular and the small cross-sectional openings are rectangular.
- 1           4.     The drain of claim 2 wherein the first plurality of openings is formed in
- 2     the outer surface along the longitudinal axis.

1           5.       The drain of claim 2 that further includes a second plurality of openings  
2 comprising alternating large cross-section openings and small cross-sectional openings.

1           6.       The drain of claim 5 wherein the second plurality of openings is formed in  
2 the outer surface along the longitudinal axis.

1           7.       The drain of claim 5 wherein the first plurality of openings is formed in  
2 the outer surface along the longitudinal axis.

1           8.       The drain of claim 5 wherein the large cross-sectional openings of the  
2 second plurality of openings are offset from the large cross-sectional openings of the first  
3 plurality of openings.

1           9.       The drain of claim 5 wherein the small cross-sectional openings of the  
2 second plurality of openings are offset from the small cross-sectional openings of the first  
3 plurality of openings.

1           10.      The drain of claim 2 wherein the interior lumen extends the length of the  
2 drain.

1           11.      The drain of claim 2 wherein the opening is at an end of the drain.

1           12.      The inflow section of claim 11 wherein the end opposite the opening is  
2 plugged to prevent bodily material from entering.

1           13.      A surgical drain system comprising the drain of claim 2.

1           14.      The surgical drain system of claim 13 further comprising a reservoir and  
2 an outflow to be extending from the drain to the reservoir

3           15.      A surgical drain comprising:

4                   (a)     an outer surface, an internal lumen, a generally flat bottom surface  
5 and a generally flat top surface;

- 6 (b) two side surfaces connecting the top surface and the bottom  
7 surface;
- 8 (c) circular openings in the top surface; and
- 9 (d) non-circular openings in one of the side surfaces.
- 10 16. The drain of claim 15 wherein the non-circular openings are rectangular.
- 11 17. The drain of claim 15 wherein the circular openings have a diameter of 4  
12 mm.
- 13 18. The drain of claim 15 that further includes circular openings on the bottom  
14 surface.
- 15 19. The drain of claim 15 that includes non-circular openings on both side  
16 surfaces.
- 17 20. The drain of claim 15 that includes at least one rib in the internal lumen to  
18 separate the top surface and the bottom surface.
- 19 21. The drain of claim 20 that includes two ribs to separate the top surface and  
20 the bottom surface.
- 21 22. The drain of claim 2 wherein the lumen has diameter of 6 mm..
- 22 23. A surgical drain having an outer surface, an interior lumen, and a channel  
23 formed in the outer surface, the channel for impeding the in-growth of bodily tissue  
24 therein, and one or more openings formed at least partially in the base of channel, the  
25 openings in fluid communication with the interior lumen.
- 26 24. The drain of claim 23 wherein there are four channels.
- 27 25. The drain of claim 23 wherein the channel is about 0.5 mm deep.
- 28 26. The drain of claim 23 wherein the drain has a circular cross-section.

- 29            27.    The drain of claim 23 wherein the openings are rectangular.
- 30            28.    The drain of claim 27 that further comprises circular openings.
- 31            29.    The drain of claim 28 wherein the circular openings are formed along the
- 32 channel.
- 33            30.    The drain of claim 29 wherein the circular openings alternate with the
- 34 rectangular openings.

35